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CALIFORNIA EARTH SCIENCE CORPORATION

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July 5, 1973

CONTRACT NAS 9-13260 (NAS 2-7698)
MONTHLY PROGRESS REPORT NO. 1
JUNE 1973

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Fault Tectonics and Earthquake Hazards in the Peninsular
Ranges, Southern California, EREP Investigation 463

NASA, Ames Research Center
Mail Code 241-1
Moffett Field, CA 94035

N73-27257

Attention: E73-10781) FAULT TECTONICS AND
EARTHQUAKE HAZARDS IN THE PENINSULAR
RANGES, SOUTHERN CALIFORNIA Monthly
Gentlemen: Progress (California Earth Science Corp.,
Santa Monica.) 3 p HC \$3.00 CSCL 08K

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California Earth Science Corporation (CalESCO) is pleased to submit its 1st
Monthly Progress Report on the application of Skylab imagery to analysis of
fault tectonics and earthquake hazards in the Peninsular Ranges, southern
California under NASA contract No. NAS 9-13260.

Summary Outlook

The principal plans for the immediate future are to accomplish preliminary
analysis and field studies of the area covered by images from Skylab No. 1.
The summary outlook will provide a time-oriented schedule of the entire effort
to be performed.

Significant Progress

The test site was photographed by the 190A camera aboard Skylab No. 1 on June
2, 1973. Portions of the test site near the coast were cloudy and overcast;
inland desert areas were clear. It is anticipated that this imagery will be
obtained from NASA on or about August 1, 1973.

The milestone plan required under the Statement of Work is in preparation and
will be submitted on or about July 15, 1973.

The following supporting studies of the test site have been initiated:

1. Review of the published literature, geologic maps and reports pertaining to the fault tectonics, record of earthquakes, and geologic data on the history and magnitude of fault slip. This data will provide the background for a comparison of the appearance of different faults and tectonic features on the Skylab imagery.
2. Aircraft and ERTS photographs of the test site are being identified, and obtained.
3. Copies of the California Division of Mines and Geology 1/250,000 and 1/750,000 scale geologic maps suitable for the preparation of mylar transparent overlays are being obtained.

Expected Accomplishments, Current Month

1. Photographs of the test site will be received and a preliminary analysis will be initiated.
2. The milestone plan will be submitted.
3. The supporting studies will be continued.
4. Image enhancement of the Skylab photographs under subcontract to the Rand Corporation will be initiated.

Travel Summary and Plans

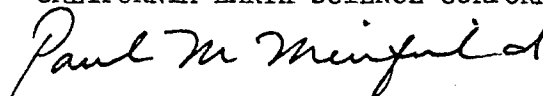
Dr. Donald L. Lamar of CalESCO visited Dr. Leo Popoff, the Technical Monitor, NASA Ames Research Center, June 21, 1973. The objectives of the research and plans for timely dissemination of the results to U.S. Geological Survey, the California Division of Mines and other local government agencies were discussed. Dr. Lamar also attended the Conference on Tectonic Problems of The San Andreas Fault System at Stanford University, June 21-22, 1973. The purpose was to present the results of previous research under a U.S. Geological Survey contract and to become familiar with the most recent research being accomplished on the San Andreas fault system which is the most significant tectonic feature in the test site.

July 5, 1973

The Principal Investigator visited the U.S. Geological Survey EROS office, Washington D.C. for the purpose of signing a contract for a related investigation utilizing ERTS imagery to the analysis of fault tectonics and earthquake hazards in California. The objectives of this and the subject contract are similar and will provide an interchange of information between the U.S. Geological Survey EROS office and the NASA Skylab Program. The P.I. also visited the EROS Data Center, Sioux Falls, South Dakota to obtain information on ordering ERTS and other aerial coverage of the test site.

Very truly yours,

CALIFORNIA EARTH SCIENCE CORPORATION



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